

# ABSTRACT

A method for modeling the output waveform of a cell driving a resistance-capacitance network includes multiple effective capacitances. A method of calculating Thevenin parameters includes the steps of (a) initializing estimates of effective capacitances  $C_{eff1}$  and  $C_{eff2}$ , of a switching threshold delay  $t_0$ , and of a slope delay  $deltat$ ; (b) solving ramp response equations for  $t_0$  and  $deltat$  as a function of  $C_{eff1}$  and  $C_{eff2}$ ; (c) comparing the estimates of  $t_0$  and  $deltat$  with solutions for  $t_0$  and  $deltat$  found in step (b); and (d) replacing the estimates of  $t_0$  and  $deltat$  with the solutions for  $t_0$  and  $deltat$  if the solutions for  $t_0$  and  $deltat$  have not converged to the estimates of  $t_0$  and  $deltat$ .